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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,476

01/16/2004

George P. Latos

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EXAMINER

FERGUSON SAMRETH, MARISSA LIANA

ART UNIT

PAPER NUMBER

2854

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/759,476	Applicant(s) LATOS ET AL.	
	Examiner MARISSA L. FERGUSON-SAMRETH	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/14/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-10,12-24,31-34,39 and 40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 12-24, 31-34, 39 and 40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 7-10 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki et al. (US Publication 2002/0059875) in view of Tkacz et al. (US Patent 5,845,569).

Regarding claim 1, Yamasaki et al. teaches (a) a plurality of holders (refer to figure 1 on page 3 of office action), each of the holders configured to register a workpiece (6) to be treated in a registered position fixed relative to the holder (note: it is apparent that the workpiece has to be registered relative to the holder in order for the apparatus to function properly), (b) a laser (20) selectively projecting a laser beam along a projection path and (c) a printing head (12), wherein each of the plurality of holders is moveable relative to the laser and relative to the printing head to selectively expose a surface of the workpiece to be treated to the laser and to the printing head (conveyors 14, 15 are moveable between the laser and printing positions shown on Figures 1-3), the projection path along which the laser beam is projected intersecting with the surface of the workpiece to be treated when the surface is exposed to the laser to treat the workpiece (Page 3, paragraph 0063, 0064, 0066 and Figures 6A, 7A and 8A), and the

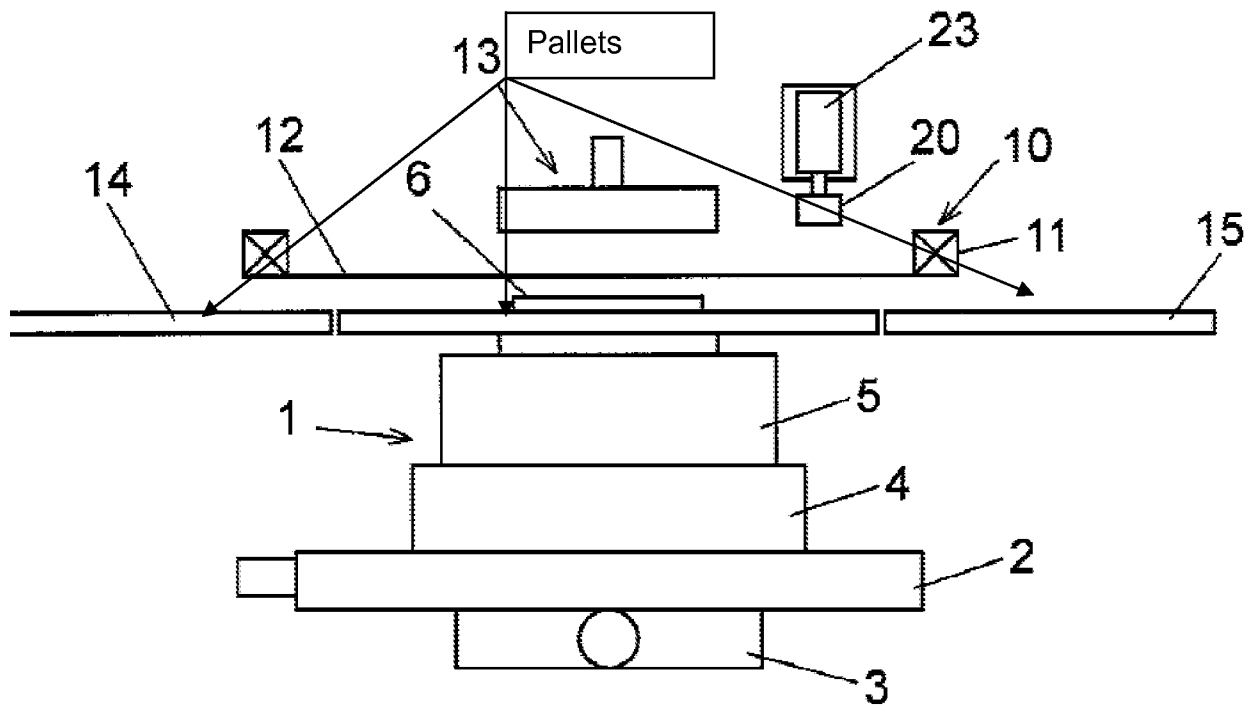
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printing head (12) printing on the surface of the workpiece (6) to be treated when the surface is exposed to the printing head (paragraph 0062) and the workpiece being in the registered position fixed relative the holder when the surface is exposed to the laser and when the surface is exposed to the printing head (Figures 2 and 3).

However, Yamasaki et al. does not explicitly disclose a plurality of pallets. Tkacz et al. teaches a printing machine with a plurality of pallets (14, 26 and 28). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Yamasaki et al. to replace the holders thereof with pallets as taught by Tkacz for the purpose of providing a more stable support for a workpiece.

Regarding claim 2, Yamasaki et al. teaches a controller (CPU 30 functions as a controller) connected to the laser.

Regarding claim 3, Yamasaki et al. teaches wherein the printing head is moveable between a screening position (Figure 8A) and a retracted position (Figure 1).



Regarding claim 5, Yamasaki et al. teaches wherein the pallet is moveable (paragraph 0060).

Regarding claim 7, Yamasaki et al. teaches wherein the laser is moveable (paragraphs 0063, 0064).

Regarding claim 8, Yamasaki et al. teaches wherein the printing head includes a screen (12) for passing the ink.

Regarding claim 9, Yamasaki et al. teaches wherein the laser includes a scanning laser (paragraph 0064).

Regarding claims 10 and 20-23 Yamasaki et al. teaches (a) a plurality of holders (refer to figure 1 on page 3 of office action), each of the holders configured to register a

workpiece to be treated in a registered position fixed relative to the holder (note: it is apparent that the workpiece has to be registered relative to the holder in order for the apparatus to function properly), (b) a screen (12) for passing ink to print and (c) a laser (20) projecting a laser beam along a projection path wherein each of the plurality of holders (refer to figure 1 on page 3 of office action) is movable relative to the laser and relative to the screen between a screening position aligned with the screen such that the screen passes ink to mark and print onto a surface to be treated of the workpiece and a spaced position (Figures 1 and 8A) at which the projection path along which the laser beam is projected intersects with the surface to be treated of the workpiece to treat the surface with the laser (Figure 4), the workpiece being in the registered position fixed relative to the holder when the holder is in both the screening position (Figure 8A) and the spaced position (Figure 1) and removing the laser treated and marked workpiece (note: it is obvious the workpiece has to be removed from the support when done so that the workpiece can be put to use).

However, Yamasaki et al. does not explicitly disclose a plurality of pallets. Tkacz et al. teaches a printing machine with a plurality of pallets (14, 26 and 28). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Yamasaki et al. to replace the holders thereof with pallets as taught by Tkacz for the purpose of providing a more stable support for a workpiece.

2. Claims 13, 14, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki et al. (US Publication 2002/0059875) in view of Tkacz et

al. (US Patent 5,845,569) as applied to claims 10 and 20 above, and further in view of Kamen (US Publication 5,985,376).

Regarding claims 13 and 14, Yamasaki et al. and Tkacz et al. teaches the claimed invention with the exception of wherein the laser includes a focusing optic in the projection path for changing a focal point of the laser beam along the projection path and wherein the laser includes a beam expander in the projection path. Kamen teaches a UV laser radiation source that projects a beam onto an object (114 and note: it is obvious that the laser would include a focusing optic since the beam directly irradiates on the object as seen in figure 9) and the laser includes a beam expander (refer to multiple beams radiating from the laser in figure 9). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Yamasaki et al. in view of Tkacz et al. to replace the laser thereof with a laser with a focusing optic and beam expander as taught by Kamen for the purpose of efficiently transferring the image to the object.

Regarding claim 24, Yamasaki et al. and Tkacz et al. teaches the claimed invention with the exception of marking the workpiece with a plurality of inks. Kamen teaches marking an object with multiple colors (Column 2, Lines 59-60). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Yamasaki et al. in view of Tkacz et al. to include the marking an object with multiple colors as taught by Kamen for the purpose of providing a more decorative and aesthetically pleasing image to an object.

Regarding claims 39 and 40, Yamasaki et al. and Tkacz et al. teaches the claimed invention with the exception of a laser projecting a laser beam along a projection path to intersect the workpiece on each of the pallets, the laser beam selected to effect one or more of a pretreatment of a workpiece to condition the workpiece for reception of the colorant and a post treatment of the colorant on the workpiece. Kamen teaches a laser (118, Column 17, Lines 1-52) projecting a laser beam along a projection path to intersect the workpiece on each of the pallets, the laser beam selected to effect one or more of a pretreatment of a workpiece to condition the workpiece for reception of the colorant such as curing to support the next layer (Abstract). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Yamasaki et al. in view of Tkacz et al. to replace the laser thereof with the laser the intersects the workpiece and a pretreatment as taught by Kamen for the purpose of efficiently preparing an object for image transfer.

3. Claims 1-3, 5, 6, 8, 10,12, 17-19, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tkacz et al. (US Patent 5,845,569) in view of Bowker et al. (US Patent 6,559,410).

Regarding claims 1, 2, 6, 10, and 17, Tkacz et al. teaches a plurality of pallets (14,16 and 26), each of the pallets configured to register a workpiece to be treated in a registered position fixed relative the pallet (Figures 1 and 2), a screen (58) for passing ink to print (Column 6, Lines 43-57), the pallet being moveable relative to the screen

between a screening position and a space position (Figures 6 and 7) such that the screen passes ink to print onto a surface to be treated on the workpiece (Column 6, Lines 43-57), the workpiece being in the registered position fixed relative to the pallet when the pallet is in both the screening position and spaced position (note: it is apparent that the workpiece is in a registered fixed position in order for the apparatus to function properly), a printing head (28), wherein each of the plurality of pallets is movable relative to the printing head (Figures 1 and 2).

However, he does not explicitly disclose a laser selectively projecting a beam along a projection path, wherein each of the pallets is moveable relative to the laser, to selectively expose a surface of the workpiece to be treated to the laser, the projection path along which the laser beam is projected intersects with the surface of the workpiece to be treated when the surface is exposed the laser to treat the workpiece, the workpiece being in the registered position fixed relative to the pallet when the surface is exposed to the laser.

Bowker et al. teaches an apparatus using a fixed laser (92,102 and Figure 1) projecting a beam (Figure 1) intersecting a loading station (40 [functions as a pallet]) that etches patterns and designs in jeans as the jeans rotate on a carousel (Abstract), wherein the loading station is moveable relative to the laser (Figure 1), to selectively expose a surface of the workpiece to be treated to the laser (Figure 1), the projection path along which the laser beam is projected intersects with the surface of the workpiece to be treated when the surface is exposed the laser to treat the workpiece (Figure 1), the workpiece being in the registered position fixed relative to the pallet when

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the surface is exposed to the laser (note: it is obvious the workpiece has to be in the a registered fixed position in order for the apparatus to function properly).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Tkacz et al. to include a laser as taught by Bowker et al. for the purpose of forming a worn appearance on a garment.

Regarding claim 3, Tkacz et al. teaches printing heads (28) moveable between a screening position and retracted position (Figures 6 and 7).

Regarding claim 5, Tkacz et al. teaches wherein a pallet is moveable (Column 5, Lines 43-65).

Regarding claim 8, Tkacz et al. teaches a printing head (28) including a screen (58) for passing the ink.

Regarding claim 12, Tkacz et al. teaches a plurality of screens (58 and Figure 1).

Regarding claim 18, Tkacz et al. teaches wherein the pallets rotate about a central axis (Column 7, Lines 43-53).

Regarding claim 19, Tkacz et al. teaches a frame (area surrounding screen 58) and a plurality of inks (Column 1, Lines 19-29 and Column 6, Lines 37-54).

Regarding claim 31, Tkacz et al. teaches a method and invention comprising a plurality of pallets (14,16,26 and Figure 1) for supporting at least a portion of the work piece, a plurality of printing heads/screens (28 and Figure 1) for printing the work piece disposed on the pallets, the pallets being moveable relative to the printing heads (Figures 1,2,6 and 7), each pallet moveable between a printing position proximate one

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of the plurality of printheads and a non-printing position (Figures 1, 2, 6 and 7) spaced from the printing position, and each pallet maintaining a workpiece in a registered position, fixed to the pallet in both the printing and non-printing positions (Abstract and Column 3, Lines 3-22). However, he does not explicitly disclose a controller and a fixed laser selectively projecting a laser beam along a projection path to intersect the workpiece registered on the pallets, when the pallets being moveable relative to a laser and to cut a work piece. Bowker et al. teaches an apparatus using a fixed laser (92,102 and Figure 1) selectively projecting a laser beam along a projection path to intersect the workpiece registered on the pallets (Figure 1) and controller (28) that etches (cutting) patterns and designs in jeans as the jeans rotate on a carousel (Abstract).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Tkacz et al. to include a laser as taught by Bowker et al. for the purpose of forming a worn appearance on a garment.

Regarding claim 32, Tkacz et al. teaches printing heads (28) including screens (58) and a wiper (62) for selectively urging ink through a screen (Column 6, Lines 37-57).

4. Claims 15, 16, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tkacz et al. (US Patent 5,845,569) in view of Bowker et al. (US Patent 6,559,410) as applied to claims 10 and 31 above, and further in view of Fitzer et al. (US Patent 6,396,616).

Tkacz et al. and Bowker et al. teaches the claimed invention with the exception of a moveable laser that includes a galvanometer scanning laser, a polygon scanner and a laser including a focusing optic in the projection path for changing a focal point of the laser beam along a projection path. Fitzer et al. teaches a moveable laser system and method using a scanner (26) that can be used as a polygonal scanner or a galvanometer scanner (Fitzer et al., Column 5, Lines 21-33). Also, within the scanning system there are lenses such as (74) that allows for the changing of the focal point along the optical path (element 32, Column 6, Lines 58-67 and many reference throughout the prior art).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention as taught by Tkacz et al. as modified to replace the laser thereof with a moveable galvanometer/polygon scanner and a focusing optic as taught by Fitzer et al., since Fitzer et al. teaches that it is desirable to incorporate a compact laser system thereby achieving significant beam energy.

Response to Arguments

5. Applicant's arguments filed 12/14/07 have been fully considered but they are not persuasive. Regarding applicant's arguments with respect to Yamasaki et al., page 11, 2nd paragraph, the examiner notes figures 4, 6A, 7A and 8A, shows the laser 20 intersecting the workpiece.

Regarding applicant's arguments on page 11, "As illustrated in all of the embodiments of Kamen, the article to be printed must be rotated relative to its holder",

the examiner notes that it appears that only the embodiment in figure 1 rotates with respect to the holder. In figures 2, 3 and 9, the workpieces appear and to be fixed relative to the holder and show not indication of rotation. Additionally, "at least that a workpiece to be treated is fixed relative to a pallet on which the workpiece is registered" is a new limitation added to the claim.

In response to applicant's arguments regarding Tkacz et al. in view of Bowker et al. that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is well known in the art to use laser technology. Tkacz et al. teaches the claimed limitations except for the laser and it would be within the skill of ordinary art to add a laser technology as taught in Bowker et al. in order to make different patterns, etc. on the garments. The motivation for combination is to make the garment more appealing and aesthetically pleasing to the consumer.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L. Ferguson-Samreth whose telephone number is (571) 272-2163. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel J. Colilla/
Primary Examiner
Art Unit 2854

Marissa L Ferguson-Samreth
Examiner
Art Unit 2854

MFS